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Burnout and Socio-demographic Characteristics of Nurses in Iran

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Abstract

Background: Nursing is considered as a profession at risk for high levels of stress and burnout, and these levels may be increasing as the care they deliver becomes complex. The purpose of this study was to investigate the relationship between burnout and socio-demographic characteristics of nurses. **Materials and Methods:** A cross-sectional descriptive-analytical design was used. The sample consisted of 194 nurses working in five hospitals of Hamadan University of Medical Sciences in Iran, who completed the Maslach Burnout Inventory (MBI) as well as a socio-demographic questionnaire. The data were analyzed using descriptive statistics, Pearson correlations, independent t-test and ANOVA. **Results:** Results indicated moderate levels of emotional exhaustion, depersonalization and low levels of personal accomplishment. There was significant relationship between burnout and age, length of employment, and educational level. **Conclusion:** Identifying an integrative process of burnout among nurses is an essential step in developing effective managerial strategies in order to address the problem. To prevent burnout, further research is necessary to determine the factors associated with it so that recommendations can be made for future wellness interventions. [GMJ. 2014;3(4):232-7]

Key Words: Burnout; Nurses; Socio-Demographic Characteristics; Iran

Introduction

Early stages of professional socialization can be described as stressful. Despite several years of formal training, new professionals may initially feel inadequately prepared for their occupational role [1]. Among different health professions, nursing is synonymous with caring and compassion and it has been considered a profession highly susceptible to stress [2,3]. Stressful conditions are prevalent in health care sector. Research has identified certain work-related stressors involved in nursing practice including exposure to death

and dying, frustrated ideals, noise pollution, interpersonal conflicts, lack of knowledge, and insufficient social support [4,5]. The negative effects of occupational stress on health have been extensively reported [6,7], and all the reports indicate that escalating, profound and rapid changes in organizations are increasingly causing occupational stress to affect nursing workforce [8,9].

Nurse burnout is considered to be one of the most critical problems in the 21st century health care. The word "Burnout" was used for the first time in 1953, in a study that described the issue of a psychiatric nurse who

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was exhausted with her work, deriving from a composition of the English language: “burn” that means firing and “out”, that means exterior which suggests that the person with this kind of stress consumes itself physically and emotionally [10]. Burnout was first introduced into the literature by Freudenberg in the early 1970s [11]. He defined burnout as a state of fatigue or frustration that resulted from professional relationships that failed to produce the expected rewards [12]. Maslach later defined burnout as a psychological syndrome involving emotional exhaustion (EE), depersonalization (DP), and a diminished sense of personal accomplishment (PA) that occurred among various professionals who work with other people in challenging situations. In Maslach’s view, burnout undermines the care and professional attention given to clients of human service professionals and other occupations that make it necessary to be in close contact with people. These include nurses, teachers, social workers, physicians, psychiatrists, clinical psychologists, lawyers, police, and others [13]. Hooper reported that over 80% of the nurses had high or very high levels of burnout [3].

A large number of studies have been conducted to investigate the dimensions of burnout phenomenon [14,15], and some research findings show correlations between burnout and contributory factors at work place. For example, working longer hours, experiencing lower job satisfaction, and less work experience in the current job independently increased the risk of EE, working longer hours and lower job satisfaction independently increased the risk of DP, while longer time in the same job increased the risk of low PA [16]. Being younger may imply both a lack of occupational experience resources to cope with various facets of work-related stress [6,17]. Burnout has been demonstrated to reduce the quality of nursing care and nurses’ efficiency [18]. In a study conducted by Alacacioglu *et al.* EE and DP were significantly higher in younger age groups than in the older age groups, while self-actualization scores were significantly lower [19]. Dahl and O’Neal in their study on nurses during Gulf War found that the higher the education level, the better participants

were able to cope with stress [20].

Several demographic variables have been studied in relation to burnout, but the studies are relatively few and the findings are not consistent, therefore as the importance of the issue and the lack of similar studies in Hamadan, we decided to explore the burnout levels of nurses employed in five major teaching hospitals and demonstrate which socio-demographic factors affect nurses’ burnout.

Materials and Methods

This is a descriptive-analytical study carried out in Hamedan, Iran. In 2013, according to official statistics, the total number of nurses in Hamadan University of Medical Sciences and Health Services was 650 and based on the Bartlett, Kotrlik and Higgins method [21], the sample consisted of 194 randomly-selected nurses employed across five hospitals, by simple random sampling method. Inclusion criteria were as follows: 1) having at least a technician degree and 2) two years of work experience. The study was approved by the ethics committee of Hamadan University of Medical Sciences and Health Services. The procedures and purposes of study were described in detail to the nurses and if they were eligible and willing to participate, written informed consents were obtained. The study was accomplished during winter.

Data were collected with a two-part questionnaire.

The first part collected data about nurses’ socio-demographic characteristics such as age, length of employment, gender, marital status, education, family size, ward and shift. The second part included the Maslach Burnout Inventory (MBI) developed originally by Maslach [13] in English. This measure was translated into Persian and with known reliability calculated in this language [22]. A recent meta-analysis looked at 45 studies that explored the factorial structure of the MBI [23]. Validity and reliability of MBI within Iranian society has been documented. MBI reliability was assessed using Cronbach’s alpha coefficient, the results of which are as follows: EE (0.71), DP (0.78) and PA (0.72). Content validity of MBI was assessed using

Lawshe's technique and content validity index (CVI) was 0.77 [24].

MBI is a tool that evaluates burnout with three subscales measuring each dimension of the burnout, emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). Each item is rated on a 7-point Likert-type scale ranging from 0 to 6, with higher scores indicating higher levels of burnout. The EE subscale includes nine items, and measures the feelings in the individual of being exhausted by his/her job. According to the MBI manual, in this subscale scores of below 17 denote mild burnout, scores of 18 to 29 denote moderate burnout, and scores of above 30 denote high burnout. The DP subscale includes five items and measures an impersonal response towards the individuals to whom care is given. Based on MBI manual, in this subscale, scores of below 5 denote mild burnout, scores of 6 to 11 denote moderate burnout, and scores of above 12 denote high burnout. The PA subscale has eight items and measures the feelings of competence and successful achievement in one's work with people. According to MBI manual, in this subscale scores of below 33 denote mild burnout, scores of 34 to 39 denote moderate burnout, and scores of above 40 denote high burnout. High scores in EE and DP subscales and low scores in the PA subscale indicate high levels of burnout. Moderate burnout corresponds to moderate scores in each subscale. Low scores in EE and DP subscales and high scores in PA subscale indicate that burnout is at a low level. The scores of each subscale may be evaluated separately. Three different scores are calculated for each participant [13].

Statistical analysis was conducted using SPSS (Version 16) software. Descriptive statistics were computed to describe study variables. The data were analyzed using Pearson correlations, independent t-test and ANOVA. The significance level was 0.05.

Results

The mean age of the study participants was about 30 ($M=30.98$ years of age, $SD = 5.11$) and the mean length of employment was 7.24 years ($SD = 4.89$). The characteristics of the

sample are presented in Table 1.

Participants worked across different areas of specialty units including the following: surgery (19.06%), internal medicine (3.60%), intensive care (3.60%), cardiology (16.49%), emergency medicine (3.09%), cardiac (3.09%), orthopedic (5.15%), ENT (7.21%), urology (2.57%), dermatology (4.12%), ophthalmology (5.15%), pediatrics (8.75%), gynecology (2.57%), emergency room (3.09%), hematology (3.60%), psychiatry (2.57%), toxicology (5.15%) and gastrointestinal (4.12%). Nurses worked on different shifts. The order of the shifts reported by nurses was as follows: morning (41.74%), night (37.1%), and rotating (21.13%). Descriptive statistics for MBI subscales are shown in Table 2.

Correlation analysis showed a negative significant association between EE and age ($P = 0.008$, $r = -0.34$), and length of employment ($P = 0.009$, $r = -0.33$).

Table 1. Characteristics of the Sample (N = 194)

Variables	%
Gender	Male
	16.49%
	Female
	83.51%
Marital status	Married
	76.80%
	Single
	23.20%
Education level	Associate
	4.63%
	BS.s
	92.80%
	MS.s
	2.57%
Number of children	Without
	36.08%
	One
	28.35%
	Two
	29.89%
	Three or more
	5.68%

Table 2. The prevalence of burnout in nurses - % (N=194)

Variable	Mild	Moderate	High
Emotional Exhaustion	30.74	63.70	5.56
Depersonalization	22.50	69.12	8.38
Personal Accomplishment	75.23	17.56	7.21

One way ANOVA indicated, that there was a statistically significant relationship between the level of education and PA ($P = 0.013$, $F = 4.489$).

There was no significant relationship between MBI subscales scores and factors such as gender, marital status, family size and shift.

Discussion

The main objective of this study was to examine the relationship between burnout and socio-demographic characteristics of nurses. As shown in Table 2, participants showed moderate levels of EE and DP and mild levels of accomplishment when compared to another research on burnout among nurses in Iran [14]. This set of findings can be interpreted in a number of ways.

The relationship between age, length of employment and burnout appears in line with observations that burnout symptoms may decrease when people get older. These associations may be explained by the development of better coping strategies by more experienced nurses, as both variables are closely related with professional experience. [6,17]. Alternatively, this association may reflect a “survival bias” (as this study was cross-sectional).

This study did not find a statistically significant relationship between gender and burnout, although such an analysis is limited by the scarce number of male nurses ($n=32$). Some research studies suggest that there is an association between burnout and gender (25), and initially it was claimed that women report higher burnout levels than men [17,26]. Other researchers have found the opposite [27] or no differences [24,28].

Previous studies have reported that being married/having a permanent partner is not associated with burnout or its dimensions, and this study supports previous studies that show a higher but not significant EE in married nurses compared with unmarried nurses [29]. Others have found that single, separated, widowed, or divorced nurses score significantly lower on the PA subscale compared with married nurses [30]. It may be possible that the work is not the single source of satisfaction for married nurses as other studies described.

Although it has been reported that being married results in greater responsibilities/time demands inducing family-work conflicts leading to burnout, an alternative scenario has also been proposed in which a supportive partner may aid in coping with stress and preventing burnout.

Having children was associated with greater burnout as a previous study reported [31]. Studies conducted in civilian nurses have reported that having children is positively associated with burnout, probably by generating additional responsibilities for the nurse and generating family-work conflicts [32]. This may be particularly true for female nurses in Peru where traditional cultural beliefs assign the child-rearing responsibility exclusively to women. There were no significant differences in subscale scores for burnout on shift variable. This finding is consistent with the findings of Hopper [3]. Others have found that working at night shift is associated with higher burnout scores [33].

Based on the results, inadequate professional training leads to burnout in nurses. As mentioned in the study of Stewart and Arklie [34], Harris found that nurses with lower levels of education experience more burnout. Dahl and O’Neal [20], in their study on nurses during Gulf War, found that the higher the education level, the better participants were able to cope with stress. Other studies also confirm this finding [3,17].

The study findings are important for several reasons: this is one of the first published studies that explored the correlation between socio-demographic and burnout of nurses in Hamadan. Second, identification of the socio-demographic characteristics and dimensions of burnout may aid the identification of high-risk groups and potentially modifiable risk factors for burnout, a critical step for developing effective preventive strategies for this vulnerable population.

Given its exploratory nature, this study has a limitation that should be considered when interpreting its results, and that is the characteristics of the nursing population evaluated in the study which may complicate the generalizability of the study findings. However, we believe that the study results may reasonably

be applied to other nursing personnel working in hospitals in Iran. Since social determinants of health can also affect the nurses' burnout, assessing the factors should be considered in future studies.

Conclusion

Identifying an integrative process of burnout among nurses is an essential step to develop effective managerial strategies in order to address the problem. To prevent burnout, further

research is necessary to determine the factors associated with it so that recommendations can be made for future wellness interventions.

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References

1. Duchscher JEB. Transition shock: the initial stage of role adaptation for newly graduated Registered Nurses. *J Adv Nurs*. 2009;65(5):1103-13.
2. Bourbonnais R, Comeau M, Vezina M, Dion G. Job strain, psychological distress, and burnout in nurses. *Am J Ind Med*. 1998;34(1):20-8.
3. Hooper C, Craig J, Janvrin DR, Wetsel MA, Reimels E. Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *J Emerg Nurs*. 2010;36(5):420-7.
4. Lewis D, Robinson J. ICU nurses' coping measures: response to work-related stressors. *Crit Care Nurse*. 1992;12(2):18-23.
5. Schmitz N, Neumann W, Oppermann R. Stress, burnout and locus of control in German nurses. *Int J Nurs Stud*. 2000;37(2):95-9.
6. Garrosa E, Moreno-Jiménez B, Liang Y, González JL. The relationship between socio-demographic variables, job stressors, burnout, and hardy personality in nurses: An exploratory study. *Int J Nurs Stud*. 2008;45(3):418-27.
7. Shirom A. The effects of work stress on health: Wiley Online Library; 2003. 63-82 p.
8. McGowan B. Self-reported stress and its effects on nurses. *Nursing standard (Royal College of Nursing (Great Britain))*. 1987; 2001;15(42):33-8.
9. Shader K, Broome ME, Broome CD, West ME, Nash M. Factors influencing satisfaction and anticipated turnover for nurses in an academic medical center. *J Nurs Admin*. 2001;31(4):210.
10. Batista JBV, Batista PSdS, Barros EO, Lopes FSR, Medeiros GBP, Morais JMD. Burnout syndrome: understanding of nursing professionals who work in the hospital context. *J Nurs*. 2013;7(2):553-61.
11. Freudenberger H. Staff burnout. *J Soc Issues*. 1974;30:159-65.
12. Freudenberger H, Richelson G. Burn-out: the High Cost of High Achievement. New York: Anchor Press, Doubleday & Company; 1980.
13. Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav*. 1981;2(2):99-113.
14. Rahmani F, Behshid M, Zamanzadeh V. Relationship between general health, occupational stress and burnout in critical care nurses of Tabriz teaching hospitals. *Iran Journal of Nursing*. 2010;23(66):54-63.
15. Salahian A, Oreizi H, Babamiri M, Asgari A. The predictor factors of burnout syndrome in Isfahan nurses. *Iranian Journal of Nursing Research*. 2012;6(23):23-31.
16. Surgenor LJ, Spearing RL, Horn J, Beautrais AL, Mulder RT, Chen P. Burnout in hospital-based medical consultants in the New Zealand public health system. *New Zeal Med J*. 2009;122(1300):11-8.
17. Soares J, Grossi G, Sundin Ö. Burnout among women: associations with demographic/socio-economic, work, life-

- style and health factors. *Arch Wom Ment Health*. 2007;10(2):61-71.
18. Poghosyan L, Clarke SP, Finlayson M, Aiken LH. Nurse burnout and quality of care: Cross-national investigation in six countries. *Res Nurs Health*. 2010;33(4):288-98.
 19. Alacacioglu A, Yavuzsen T, Dirioz M, Oztop I, Yilmaz U. Burnout in nurses and physicians working at an oncology department. *J Psychosoc Oncol*. 2009;18(5):543-8.
 20. Dahl J, O'Neal J. Stress and coping behavior of nurses in Desert Storm. *J Psychosoc Nurs Ment Health Serv*. 1993;31(10):17-21.
 21. Kotrlik JWKJW, Higgins CCHCC. Organizational research: Determining appropriate sample size in survey research appropriate sample size in survey research. *Information Technology, Learning, and Performance Journal*. 2001;19(1):43-50.
 22. Filian E. Relationship between level of burnout and coping strategies in nurses. Tehran: Tarbiat Modares University; 1992.
 23. Worley JA, Vassar M, Wheeler DL, Barnes LLB. Factor Structure of Scores From the Maslach Burnout Inventory A Review and Meta-Analysis of 45 Exploratory and Confirmatory Factor-Analytic Studies. *Educ Psychol Meas*. 2008;68(5):797-823.
 24. Rashedi V, Foroughan M, Hosseini MA. Burnout and related demographic variables among Tehran Welfare Organization staffs. *Journal of Kermanshah University of Medical Sciences*. 2012;16(1):28-36.
 25. Caccese TM, Mayerberg CK. Gender differences in perceived burnout of college coaches. *J Sport Psychol*. 1984;6(3):279-88.
 26. Maslach C, Jackson SE. The role of sex and family variables in burnout. *Sex Roles*. 1985;12(7):837-51.
 27. Maunz S, Steyrer J. Burnout syndrome in nursing: etiology, complications, prevention. *Wiener Klinische Wochenschrift*. 2001;113(7-8):296-300.
 28. Rashedi V, Foroughan M, Hosseini MA. Correlation between organizational culture and burnout in the staff of Tehran province welfare organization. *Journal of Health Promotion Management*. 2012;1(2):15-22.
 29. Albaladejo R, Villanueva R, Ortega P, Astasio P, Calle M, Domínguez V. Burnout syndrome among nursing staff at a hospital in Madrid. *Revista Española de Salud Pública*. 2004;78(4):505-16.
 30. Atance MJC. Epidemiologic aspects of the burnout syndrome in hospital personnel. *Revista Española de Salud Pública*. 1997;71(3):293-303.
 31. Ayala E, Carnero AM. Determinants of burnout in acute and critical care military nursing personnel: A cross-sectional study from Peru. *PloS one*. 2013;8(1):544-8.
 32. Fujimoto T, Kotani S, Suzuki R. Work-family conflict of nurses in Japan. *J Clin Nurs*. 2008;17(24):3286-95.
 33. Kivimäki M, Kuisma P, Virtanen M, Elovainio M. Does shift work lead to poorer health habits? A comparison between women who had always done shift work with those who had never done shift work. *Work & Stress*. 2001;15(1):3-13.
 34. Stewart M, Arklie M. Work satisfaction, stressors and support experienced by community health nurses. *Can J Publ Health*. 1994;85(3):180-4.